

The Florida State Fair Association wishes to interest you in the development of our great State.

The Fair to be held in Lake City, on November 11, 12, 13 and 14, 1902, will show how much we have in which to take honest pride. We wish to make you feel a personal interest in the Fair. We have, therefore, offered the following special prizes to be competed for by pupils in the public schools of the State, Friday, Nov. 14th, in Lake City. You can learn full particulars of your County School Superintendent, who will be kept officially informed. The contests will be under the general supervision of Miss Clem Hampton, who is Superintendent of the Educational Department of the Fair.

Gold Medals are offered as follows:

1. Best Declamation by Boy under 12 years old.
2. Best Declamation by Boy between 12 and 16 years old.
3. Best Recitation by Girl under 12 years old.
4. Best Recitation by Girl between 12 and 16 years old.
5. Best Story by Boy or Girl under 16 years old, subject to be announced at time of contest, but to be confined to something actually seen at the State Fair, or to some influence of the Fair.

H. E. STOKBRIDGE,  
Secretary State Fair Association.  
Lake City, Fla., Sept. 16, 1902.

#### State Fair Notes.

All the railroads entering Lake City will run special excursion trains on certain days during the Fair at greatly reduced rates.

The Colored people are very enthusiastic over the Colored Department, for which separate provisions and special premiums will be made. The Board of Managers of this Department consist of Prof. N. B. Young, Tallahassee; Rev. J. L. Moore, St. Augustine; M. N. Dewey, Pensacola; B. J. Jones, Lake City; J. D. McDuffy, Ocala; Prof. W. J. Jarvis, Jacksonville; S. F. Hadley, Lake City, and Rev. D. A. Perrin, Tampa.

The races will be among the best ever seen in the South.

Record-breaking horses from the best stables in the country will come from the Inter-State and Georgia State Fairs direct to Florida. Remember that the World's record on half-mile track was broken at our Fair last year.

A large herd of cattle from Tennessee has been entered, and the best Dairy Animals in the South will be exhibited. You will see a Modern Dairy in actual operation, and have a chance to eat butter less than an hour after the milk comes from the cow.

Friday, Nov. 14th, will be "School Children's Day." It is hoped all schools will close on that day. Schools in charge of teachers will be admitted at merely nominal rates. Don't forget the Gold Medal contests for Florida Boys and Girls, to be decided on that day.

#### Warrants Worth \$40,000 Destroyed.

Some time after the warrants were issued for those having claims against the state of Florida for service in the Indian War, Capt. J. F. P. Johnston placed \$27,000 worth of them in a safe belonging to his father. This safe was moved from place to place and as the warrants were not considered of any value, they were never removed. The key to the safe was lost and several efforts were made to drill into it. Holes were bored into the safe and this permitted the rain to enter. Not long ago Capt. Johnston opened the safe to get the warrants and found that the rains had completely destroyed them. They had been transformed into mud and not a line or scratch of the pen could be discerned. If the warrants could be had now, they would be worth over \$40,000.

## HOME STUDY COURSE

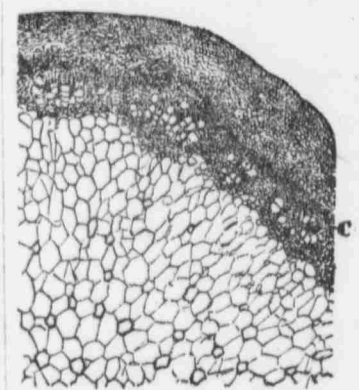
Self Education Through the Medium of Specially Prepared Articles by Prominent Instructors

### OUR NATIVE TREES

By...  
THOMAS H. MACBRIDE, Ph. D.,  
Professor of Botany, Iowa State University.

#### I.—What Is a Tree?

TREES in our country are fortunately so common as almost to pass without definition. Everybody knows a tree and knows all about it too. At least he thinks he does. He knows that a tree has an erect persistent stem, wide-spreading or deep descending roots, waving, far extending branches and abundant leaves, casting in summer a grateful shade, in autumn falling. He knows that trees, some of them at least, bear flowers and fruits and seed, reproducing the species "after their kind." This much everybody knows, and these indeed are some of the patent, obvious features of a tree. Nevertheless, as may be suspected, this is only an outside or surface view of the subject. When we come to inquire how the tree comes to be what it is, how it does all the things that we see it do, how it pushes the roots through the hard ground where a plow can hardly go, how the leaves elaborate its food, how it builds stem and bark and branch and carries pound after pound, ton after ton; away up into the air, how it endures while living summer's drought and winter's cold, not for a few years, but year after year, for centuries and centuries—when we begin to



Transverse Section of a Maple Twig Highly Magnified. C.—The Cambium Line.

think of trees in this way, it is plain that all our surface knowledge counts but little. We are in the presence of a mechanism of wonderful efficiency, but also of great complexity, whose delicate adjustments may tax the cunning of the wisest.

Now, in a few short chapters which constitute this course a complete answer to the problem of the tree or even a complete statement of it is certainly not to be expected. We may perhaps study the problem in some of its simpler aspects, learn a little of the structure of a tree, of its history, and more of its utility and exceeding value to enlightened men and nations.

Perhaps the most striking peculiarity of the tree is its persistence. Other plants grow, send up stems and leaves and flowers, begin many of the things done by the tree, but these presently perish, survive a few months or years at most and are gone. Only plants of the tree type seem able to accumulate, to carry forward the work of life and make each year contributory to life's perennial triumph. Fortunately this particular property of the tree, taking things as they are, admits of comparatively simple explanation. We find the explanation in so far in the tree's structure, just as in the case of any mechanism we may study the parts and find out how they work and so understand the machine. If we make a thin cross section of the stem of a small tree and lay the section under the lens of a microscope, we shall see something like that shown in the accompanying illustration, which is indeed from a photograph of such a section.

Here the whole section seems made up of little rings. The early observers thought these rings looked like a section of a honeycomb and accordingly called them cells. At a glance we perceive that the rings or cells are not

alike. They differ greatly in size and shape. A second glance shows us that the cells fall easily into groups which form together a circle around within the margin. The cells which make up this band or circle are in the growing tree, all living cells and all active, each in its own way. Within the limits assigned us here we may not consider them all, but must pay attention to the very smallest only, those that make up a narrow band, marked C in the figure. It is to these tiniest but ever living cells that the tree of the forest owes its character, its long enduring vigor. Being living cells, these can grow, and by their peculiar way of growing they accomplish three things—they lie between bark and wood, and all the time in the growing season those on the outside become transformed into cells that make up the cortex, ultimately the bark, and are added to its inner surface; those on the inside are in a similar way passing over into the form of the cells of ordinary wood, either to form wood de novo or to be added to the wood already in position; the middle cells of the band simply divide and divide and so keep up a perennial supply of cells of such plastic sort. Here is the secret of the tree's endurance and of its increase in thickness, for we must remember we are studying a cross section of the tree, taken anywhere, and we must therefore conceive these tiny cells to form a living sheath covering the whole tree, lying between bark and wood. In spring we very easily pull the bark from a living tree—a willow, for instance—the separation occurring in the plane of this living but proportionately delicate cell layer. This living, active layer has long been named the cambium. We shall refer to it again.

But let us look at our section again. We may discover still another peculiarity. The border cells arrange themselves in groups, with slight intervals between. The cells of these intervals are continuous with the large cells of the middle, with the pith, or medulla. They may be regarded as at first part of the medulla. They form the medullary rays. They build as they grow vertical plates radiating outwardly from the center of the tree. At first the plates are comparatively few, but as growth proceeds the primary rays are continually re-enforced by others, originating indeed in the persistent cambium and intercalated between those already formed until their number, as may be seen in any bit of wood, as oak, becomes very great. Split a piece of such wood, and the medullary plates appear and shine, called by the artisan "silver grain."

Let us now recapitulate the structures of the stem as we have studied them. In the center of our section lies the medulla, or pith, bounded on the outer side by a ring of forming wood. Next to this outwardly lies the cambium, beyond which, again, is the cortex, the forming structures of the bark. The elements of bark and wood are gathered plainly into groups, and intervening between these several groups, intercepting what would be otherwise a continuous arc, occur the medullary rays.

(Copyright, 1902, by Lewis D. Sampson.)

#### His Weakness.



Visitor—My brother, don't you know that you ought to do people good instead of evil?  
Convict—Dat's wot I'm in here for—doin' people good!—Chicago News.

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### SCHEDULE NO. 3.

Taking Effect Thursday, April 17, 1902.

READ DOWN.			READ UP.		
No. 5.	No. 3.	No. 1.	No. 2.	No. 4.	No. 6.
PASS Su'd'y Only.	PASS Daily Except Su'd'y	PASS Daily Except Su'd'y	PASS Daily Except Su'd'y	PASS Daily Except Su'd'y	PASS Su'd'y Or y
P. M.	P. M.	A. M.	A. M.	P. M.	A. M.
4 00	4 15	9 25	Leave.....Valdosta.....Arrive	8 30	3 15
			Dees.....		
4 25	4 40	9 50	Briggston.....	8 00	2 45
4 30	4 50	9 55	Ciyattville.....	7 52	2 37
			Walberg.....		
4 45	5 15	10 10	Olympia.....	7 38	2 25
			Udora.....		
5 00	5 40	10 25	Pinetta.....	7 10	2 00
			Cowart's Mill.....		
5 10	5 50	10 35	Hanson.....	6 40	1 50
			Calhoun.....		
5 30	6 15	11 00	Arrive.....Madison.....Leave	6 15	1 30
P. M.	P. M.	A. M.		A. M.	P. M.

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